SOLICITATION/CONTRACT/ORDER FOR COMMERCIAL ITEMS
OFFEROR TO COMPLETE BLOCKS 12, 17, 23, 24, & 30

1. REQUISITION NUMBER	PAGE	OF
See Schedule	1	16

2. CONTRACT NO.	3. AWARD/ EFFECTIVE DATE	4. ORDER NUMBER	5. SOLICITATION NUMBER	6. SOLICITATION ISSUE DATE
GS-10F-0094W	02/25/2014	EP-G14C-00448		

7. FOR SOLICITATION INFORMATION CALL:	a. NAME	b. TELEPHONE NUMBER (No collect calls)	8. OFFER DUE DATE/LOCAL TIME
	Lisa Ryle	513-487-2851	

9. ISSUED BY — CODE: CPOD

CPOD
US Environmental Protection Agency
26 West Martin Luther King Drive
Mail Code: NWD
Cincinnati OH 45268

10. THIS ACQUISITION IS ☐ UNRESTRICTED OR ☒ SET ASIDE: 100.00 % FOR:

☒ SMALL BUSINESS
☐ HUBZONE SMALL BUSINESS
☐ SERVICE-DISABLED VETERAN-OWNED SMALL BUSINESS
☐ WOMEN-OWNED SMALL BUSINESS (WOSB) ELIGIBLE UNDER THE WOMEN-OWNED SMALL BUSINESS PROGRAM
☐ EDWOSB
☐ 8(A)

NAICS: 541712
SIZE STANDARD: 500

11. DELIVERY FOR FOB DESTINATION UNLESS BLOCK IS MARKED	12. DISCOUNT TERMS	13a. THIS CONTRACT IS A RATED ORDER UNDER DPAS (15 CFR 700)	13b. RATING / 14. METHOD OF SOLICITATION
☐ SEE SCHEDULE		☐	☐RFQ ☐IFB ☐RFP

15. DELIVER TO — CODE: NRMRL WSRD UWMD

NRMRL WSRD UWMD
National Risk Mgmt Research Lab
Water Supply and Resources Division
Urban Watershed Management Branch
2890 Woodbridge Avenue (MS-104)
Edison NJ 08837

16. ADMINISTERED BY — CODE: CPOD

CPOD
US Environmental Protection Agency
26 West Martin Luther King Drive
Mail Code: NWD
Cincinnati OH 45268

17a. CONTRACTOR/ OFFEROR — CODE: 173454851 — FACILITY CODE:

PARS ENVIRONMENTAL INC.
Attn: KIRAN GILL
500 HORIZON DRIVE
SUITE 540
ROBBINSVILLE NJ 086911918

TELEPHONE NO. 6098907277

☐17b. CHECK IF REMITTANCE IS DIFFERENT AND PUT SUCH ADDRESS IN OFFER

18a. PAYMENT WILL BE MADE BY — CODE: RTP FMC

RTP Finance Center
US Environmental Protection Agency
RTP-Finance Center (D143-02)
109 TW Alexander Drive
Durham NC 27711

18b. SUBMIT INVOICES TO ADDRESS SHOWN IN BLOCK 18a UNLESS BLOCK BELOW IS CHECKED ☐SEE ADDENDUM

19. ITEM NO.	20. SCHEDULE OF SUPPLIES/SERVICES	21. QUANTITY	22. UNIT	23. UNIT PRICE	24. AMOUNT
	DUNS Number: 173454851 ***Attention Finance*** The Task Order COR is Thomas Oconnor and can be reached at 732-321-6723 or Oconnor.thomas@Epa.gov. The Alternate Task Order COR is Michael Borst and can be reached at 732-321-6631 or borst.mike@epa.gov. TOPO: Thomas Oconnor Max Expire Date: 02/25/2017 Period of Performance: 02/26/2014 to 02/25/2015 Continued ... *(Use Reverse and/or Attach Additional Sheets as Necessary)*				

25. ACCOUNTING AND APPROPRIATION DATA: See schedule

26. TOTAL AWARD AMOUNT *(For Govt. Use Only)*: $190,969.00

☐ 27a. SOLICITATION INCORPORATES BY REFERENCE FAR 52.212-1, 52.212-4. FAR 52.212-3 AND 52.212-5 ARE ATTACHED. ADDENDA ☐ ARE ☐ ARE NOT ATTACHED.

☐ 27b. CONTRACT/PURCHASE ORDER INCORPORATES BY REFERENCE FAR 52.212-4. FAR 52.212-5 IS ATTACHED. ADDENDA ☐ ARE ☐ ARE NOT ATTACHED.

☐ 28. CONTRACTOR IS REQUIRED TO SIGN THIS DOCUMENT AND RETURN _____ COPIES TO ISSUING OFFICE. CONTRACTOR AGREES TO FURNISH AND DELIVER ALL ITEMS SET FORTH OR OTHERWISE IDENTIFIED ABOVE AND ON ANY ADDITIONAL SHEETS SUBJECT TO THE TERMS AND CONDITIONS SPECIFIED.

☒ 29. AWARD OF CONTRACT: REF. _____ OFFER DATED _____. YOUR OFFER ON SOLICITATION (BLOCK 5), INCLUDING ANY ADDITIONS OR CHANGES WHICH ARE SET FORTH HEREIN, IS ACCEPTED AS TO ITEMS:

30a. SIGNATURE OF OFFEROR/CONTRACTOR	31a. UNITED STATES OF AMERICA *(SIGNATURE OF CONTRACTING OFFICER)*
	ELECTRONIC SIGNATURE

30b. NAME AND TITLE OF SIGNER *(Type or print)*	30c. DATE SIGNED	31b. NAME OF CONTRACTING OFFICER *(Type or print)*	31c. DATE SIGNED
		David Plagge	02/25/2014

AUTHORIZED FOR LOCAL REPRODUCTION
PREVIOUS EDITION IS NOT USABLE

STANDARD FORM 1449 (REV. 2/2012)
Prescribed by GSA - FAR (48 CFR) 53.212

19. ITEM NO.	20. SCHEDULE OF SUPPLIES/SERVICES	21. QUANTITY	22. UNIT	23. UNIT PRICE	24. AMOUNT
0001	Intermittent Sampling for Green Infrastructure Evaluations in accordance with the attached Performance Work Statement Requisition No: PR-ORD-13-01641, PR-ORD-14-00856 Accounting Info: 13-14-C-26CW000-202FK7-2532--26A6A-1326CWE054-001 BFY: 13 EFY: 14 Fund: C Budget Org: 26CW000 Program (PRC): 202FK7 Budget (BOC): 2532 Cost: 26A6A DCN - Line ID: 1326CWE054-001 Funding Flag: Complete Funded: $60,000.00 Accounting Info: 14-15-C-26CW000-202FK7-2532--26A5C-1426CWE033-001 BFY: 14 EFY: 15 Fund: C Budget Org: 26CW000 Program (PRC): 202FK7 Budget (BOC): 2532 Cost: 26A5C DCN - Line ID: 1426CWE033-001 Funding Flag: Complete Funded: $2,815.00				62,815.00
0002	Option Period 1 - February 26, 2015 - February 25, 2016 Intermittent Sampling for Green Infrastructure Evaluations in accordance with the attached Performance Work Statement (Option Line Item)				64,077.00
	Continued ...				

32a. QUANTITY IN COLUMN 21 HAS BEEN

☐ RECEIVED ☐ INSPECTED ☐ ACCEPTED, AND CONFORMS TO THE CONTRACT, EXCEPT AS NOTED: _____

32b. SIGNATURE OF AUTHORIZED GOVERNMENT REPRESENTATIVE	32c. DATE	32d. PRINTED NAME AND TITLE OF AUTHORIZED GOVERNMENT REPRESENTATIVE

32e. MAILING ADDRESS OF AUTHORIZED GOVERNMENT REPRESENTATIVE	32f. TELEPHONE NUMBER OF AUTHORIZED GOVERNMENT REPRESENTATIVE 32g. E-MAIL OF AUTHORIZED GOVERNMENT REPRESENTATIVE

33. SHIP NUMBER ☐ PARTIAL ☐ FINAL	34. VOUCHER NUMBER	35. AMOUNT VERIFIED CORRECT FOR	36. PAYMENT ☐ COMPLETE ☐ PARTIAL ☐ FINAL	37. CHECK NUMBER

38. S/R ACCOUNT NUMBER	39. S/R VOUCHER NUMBER	40. PAID BY

41a. I CERTIFY THIS ACCOUNT IS CORRECT AND PROPER FOR PAYMENT		42a. RECEIVED BY *(Print)*	
41b. SIGNATURE AND TITLE OF CERTIFYING OFFICER	41c. DATE	42b. RECEIVED AT *(Location)*	
		42c. DATE REC'D *(YY/MM/DD)*	42d. TOTAL CONTAINERS

ITEM NO. (A)	SUPPLIES/SERVICES (B)	QUANTITY (C)	UNIT (D)	UNIT PRICE (E)	AMOUNT (F)
0003	Option Period 2 - February 26, 2016 - February 25, 2017 Intermittent Sampling for Green Infrastructure Evaluations in accordance with the attached Performance Work Statement (Option Line Item) The obligated amount of award: $62,815.00. The total for this award is shown in box 26.				64,077.00

SECTION 2 - Section 2 2
2-1 FAR 52.217-9 OPTION TO EXTEND THE TERM OF THE CONTRACT. (MAR 2000) 2
2-2 EPAAR 1552.211-79 COMPLIANCE WITH EPA POLICIES FOR INFORMATION RESOURCES MANAGEMENT. (JAN 2012) 2
2-3 LOCAL CLAUSES EPA-H-09-107 UNPAID FEDERAL TAX LIABILITY & FELONY CRIMINAL VIOLATION CERTIFICATION 3

SECTION 2 - Section 2

2-1 FAR 52.217-9 OPTION TO EXTEND THE TERM OF THE CONTRACT. (MAR 2000)

(a) The Government may extend the term of this contract by written notice to the Contractor within 5 calendar days; provided that the Government gives the Contractor a preliminary written notice of its intent to extend at least 30 days before the contract expires. The preliminary notice does not commit the Government to an extension.

(b) If the Government exercises this option, the extended contract shall be considered to include this option clause.

(c) The total duration of this contract, including the exercise of any options under this clause, shall not exceed 36 months or 3 years..

(End of clause)

2-2 EPAAR 1552.211-79 COMPLIANCE WITH EPA POLICIES FOR INFORMATION RESOURCES MANAGEMENT. (JAN 2012)

Compliance with EPA Policies for Information Resources Management

(a) Definition. Information Resources Management (IRM) is defined as any planning, budgeting, organizing, directing, training, promoting, controlling, and managing activities associated with the burden, collection, creation, use and dissemination of information. IRM includes both information itself and the management of information and related resources such as personnel, equipment, funds, and technology. Examples of these services include but are not limited to the following:

(1) The acquisition, creation, or modification of a computer program or automated data base for delivery to EPA or use by EPA or contractors operating EPA programs.

(2) The analysis of requirements for, study of the feasibility of, evaluation of alternatives for, or design and development of a computer program or automated data base for use by EPA or contractors operating EPA programs.

(3) Services that provide EPA personnel access to or use of computer or word processing equipment, software, or related services.

(4) Services that provide EPA personnel access to or use of: Data communications; electronic messaging services or capabilities; electronic bulletin boards, or other forms of electronic information dissemination; electronic record-keeping; or any other automated information services.

(b) General. The Contractor shall perform any IRM-related work under this contract in accordance with the IRM policies, standards, and procedures set forth on the Office of Environmental Information policy Web site. Upon receipt of a work request (i.e. delivery order, task order, or work assignment), the Contractor shall check this listing of directives. The applicable directives for performance of the work request are those in effect on the date of issuance of the work request. The 2100 Series (2100-2199) of the Agency's Directive System contains the majority of the Agency's IRM policies, standards, and procedures.

(c) *Section 508 requirements (accessibility).* Contract deliverables are required to be compliant with Section 508 requirements (accessibility for people with disabilities). The Environmental Protection Agency policy for 508 compliance can be found at *www.epa.gov/accessibility*.

(d) Electronic access. A complete listing, including full text, of documents included in the 2100 Series of the Agency's Directive System is maintained on the EPA Public Access Server on the Internet at *http://epa.gov/docs/irmpoli8/policies/index.html*.

(End of clause)

2-3 LOCAL CLAUSES EPA-H-09-107 UNPAID FEDERAL TAX LIABILITY & FELONY CRIMINAL VIOLATION CERTIFICATION

(a) In order to meet the requirements of Sections 433 and 434 of Division E of the Consolidated Appropriations Act, 2012 (Pub.L. 112-74); 2013 Continuing Appropriations Resolution (Pub.L. 112-175); Consolidated and Further Continuing Appropriations Act, 2013 (Pub.L. 113-6); and Continuing Appropriations Act, 2014 (Pub.L. 113-46), the contractor shall provide the contracting officer a certification whereby the contractor certifies:

(i) It is not a corporation that has been convicted (or had an officer or agent of such corporation acting on behalf of the corporation convicted) of a felony criminal violation under any Federal law within the preceding 24 months; and

(ii) It is not a corporation that has any unpaid Federal tax liability that has been assessed, for which all judicial and administrative remedies have been exhausted or have lapsed, and that is not being paid in a timely manner pursuant to an agreement with the authority responsible for collecting the tax liability.

(b) Failure of the contractor to furnish a certification or provide such additional information as requested by the Contracting Officer may render the contractor ineligible for FY 2012, 2013 or 2014 contract funding.

(c) The contractor has a continuing obligation to update the subject certification as required.

(End of Clause)

Performance Work Statement
Intermittent Sampling for Green Infrastructure Evaluation
GS-10F-0094W
EP-G14C-00448

INTRODUCTION

EPA is developing techniques to monitor the water quality and water volume of stormwater runoff diverted from the receiving system through green infrastructure stormwater control measures. EPA lacks supporting data documenting the individual performance or the collective effectiveness of green infrastructure on the receiving systems. EPA is involved in ongoing investigatory research to monitor target systems to document the system's initial performance and to measure changes in performance with age. The research includes completing equipment calibrations, verifications, and maintenance; data collection and management; sample collection and analyses.

EPA is seeking a contractor to perform periodic sampling and analysis. This initial period of performance will be for three sampling and analysis events. The Government has the option to extend the term of the awarded task order either by requesting additional sampling events or by exercising options for up two additional annual periods of quarterly sampling and analysis.

BACKGROUND

The effort supports EPA's continued monitoring of a permeable pavement parking and rain gardens at the Edison Environmental Center (EEC) in Edison, NJ.

The parking lot has three permeable surfaces (permeable interlocking concrete pavers, porous concrete, and porous asphalt). The parking lanes are permeable while the travel lanes and the southernmost parking lane are constructed from traditional hot mix (impermeable) asphalt. Each permeable section of the parking lot has four lined subsurface sections that capture the infiltrating water and route it for sample collection and subsequent analysis. Samples are collected at two curb cuts at the south end of the parking lot and the diversion box adjacent to the parking lot using programmed automatic samplers. Rainfall samples are collected using an elevated collection system about 500 m south of the parking lot and from the passive lysimeters installed in the porous concrete.

Most of the analytical effort to support the parking lot project is completed at the EPA laboratory in Cincinnati, OH. The contractor shall prepare samples for shipment to the Cincinnati laboratory in accordance with applicable requirements (e.g., DOT regulations), EPA guidance, and established facility Standard Operating Procedures (SOPs). Sample preparation includes filtering all samples designated for dissolved analyses, sample preservation in accordance with the EPA approved Quality Assurance Project Plan (QAPP), sample logging into a tracking system, freezing of samples, and packaging for shipment by overnight courier. The contractor shall perform selected analyses on site, i.e. chemical oxygen demand (COD), pH, conductivity,

suspended solids concentration (SSC), and Redox, for each sample source.

The collection tanks have pressure transducers connected to a data logger that monitors the level and temperature at 10 minute intervals and, when triggered by a pluviometer, at 1 minute intervals during a rain event and for six hours after a rain event. The parking lot also has instrumentation i.e., time domain reflectometers (TDRs) and thermistors, buried during construction that can monitor subsurface conditions. The parking lot has a set of six monitoring wells and twelve piezometers that are accessed through manholes in the permeable surfaces. The parking lot has access ports designed into the east and west side of each permeable section. A passive lysimeter is installed on each side of the porous concrete parking lane.

At the south end of the parking lot, EPA constructed a set of six rain gardens that accept runoff from the impervious area at the south end of parking lot and the rooftop runoff from the adjacent building. These rain gardens have internal instruments for infiltration rate, soil moisture and temperature monitoring. Each rain garden also has a shallow well, a cluster of three piezometers, and a surface level monitor partially fitted with level sensors.

To support the continuing monitoring effort, the EPA maintains weather stations on the roof of building 205 immediately west of the parking lot, in the field east of the parking lot and at the Office of Research and Development Urban Watershed Research Facility (UWRF) (approximately 500 m south of the parking lot). Temperature profiles from the arrays installed during construction at each end of the four monitored parking rows are recorded at 10-minute intervals. Subsurface moisture content indicated by TDRs is also recorded at 10-minute intervals. The temperature and soil moisture are also monitored in the adjacent rain gardens that receive runoff from the impermeable southern most section of the parking lot and the rooftop runoff from building adjacent to the parking lot.

Experience has shown that once operational, the sites require limited periodic remote access. These requirements generally result from on-site irregularities (e.g., nearby lightening strikes, excessive rain events, communication conflicts) and can be remedied by telemetric access to the site via the modem and the radio network. The contractor shall provide such ongoing support. Based on experiences to date, EPA estimates that the remote access and program modifications will be no more frequent than quarterly and average less than four hours effort. The contractor shall also install the manufacturer's periodic software and firmware updates. Updates are generally no more frequent than semiannually but may require the contractor to be physically on the property. Updates may be scheduled to be concurrent with sample collection activities

Charges for shipping samples to the EPA laboratory in OH are to be paid by EPA. Responders are to assume the UWRF is supplied with adequate sample bottles and associated chemicals to perform the four quarterly samples. If supplies are running low, it is responsibility of the contractor to advise the EPA Task Order COR at the end of the sampling event so that adequate supplies can be purchased and delivered in the inter-event period. Failure to kept EPA informed about supplies that results in negative impact to sampling and analysis, may result in termination

of contractor.

Relevant standard operating procedures (SOPs) and a QAPP will be provided to the awardee. The information provided in this SOW is deemed sufficient for estimation of a fixed price estimate of three annual events.

Access to EPA facilities and EPA LAN system may require fingerprinting and background checks. While on the EEC, the contractor must wear the identification badge provided at all times.

OBJECTIVES

This project supports the continuing monitoring effort of the permeable pavement and rain garden research and demonstrative site at the EEC. This project will collect data to demonstrate seasonal and long-term patterns in exfiltrate concentrations of the identified stressors and provides comparisons of the concentrations to those found in samples of rainwater, rooftop runoff, and runoff from traditional asphalt runoff collected concurrently. The monitored stressors include metals, nutrients, carbon, chloride, and solids.

APPROACH

The contractor shall perform the following tasks:

1) Monitoring water quantity and quality performance:

a) Electronic data collection: Currently, automated downloads of for each data logger data transfer through the EPA RTP anonymous FTP site. Dataloggers are powered by a combination of solar panels and batteries. The contractor shall check functionality and complete periodic limited maintenance of logging stations as conditions require (e.g., replacing deep cycle marine batteries, updated logger operating systems) as needed.

b) Maintaining sampling locations: The contractor shall assure 12 underdrain collection tanks, two curb cuts, diversion box, lysimeters, and rainwater collection tank are ready for next sampling event. Underdrain collection tanks shall be completely emptied and cleaned using brushes and tap water before each sampled storm. The tanks are 1,500-gallon HDPE tanks partially buried to intercept water captured in the twelve lined sections of the permeable surfaces. Inflatable plugs and precleaned sampling buckets (for smaller storms) shall in place in underdrain tanks before the event. Power washing shall be required before next sampling event when solids accumulate on the walls of the tank (**note:** *the tanks are considered non-permit confined spaces and appropriate safety precautions are required*). Automated samplers at the two curb cuts and diversion box will require clean bottles and tubing. The contractor shall program the automated samplers based on expected duration of the storm event with an equation supplied by EPA. The program shall include an integral trigger that indicates the start of the runoff has reached the sampler. EPA will supply the automatic samplers (American Sigma). One sampler shall collect samples in a precleaned composite container. The second sampler shall be programmed to collect discrete samples. The contractor shall rinse the rainwater collection station with tap water and position a 30-gallon HDPE container to collect the rainwater. The contractor shall rinse and drain the passive lysimeters installed in the porous

concrete.

c) Defining sample event: The contractor shall consider sampled storms to be the first rain event during January, April, and August that generates sufficient exfiltrate volume to meet the requirements outlined in the QA plan. For an event to be sampleable, there must have been sufficient time and favorable weather to allow cleaning the tanks. Rain events that end on Sundays will be sampled on Monday and processed. Events that end on Friday afternoon or Saturday will not be sampled. There are no requirements for rain-free antecedent conditions. Snow melt is **not** considered an event although rain on snow is acceptable. The end of an event is determined to be 6 rain free hours or reasonable expectation of 6 rain free hours based on on-line RADAR from the National Weather Service.

A sampleable event shall be a rain event that produces sufficient volume in the underdrain tanks for sampling all parameters of at least two of the four underdrains for each permeable surface; technically this means a minimum of six samples is required to indicate success as a sampling event as there is the expectation that other surfaces may not produce sufficient runoff.

d) Sample collection: The contractor shall attempt to collect samples from all 18 locations; additionally, a laboratory and field blank are required along with duplicate samples from two randomly-selected underdrain collection tanks will be collected.

When the rain event produces adequate exfiltrate volumes, the samples are collected directly from the underdrain collection tanks. After a rain event, each tank is homogenized by circulating collected water using a gasoline-driven centrifugal trash pump for at least 15 minutes (note, the fuel for the gasoline pumps is to be supplied by the contractor and cannot be stored on-site). The pump shall be primed as needed using water collected in the tank. The samples are then taken using an individual precleaned PVC bailer for each tank. The pump and pump hoses are rinsed with tap water from a yard spigot and allowed to drain between tanks. Each set of four tanks has a dedicated set of hoses. The relative volumes and the rinsing help keep cross contamination to minimal levels. EPA will provide pumps and hoses. EPA will provide bailers, however it is incumbent on the contractor to prepare the bailers for use.

When the sampleable rain event produces too little volume to collect samples from the tank, samples will be collected from prepositioned, precleaned HDPE buckets that intercept the exfiltrate. The buckets shall be supported using thin (ca. $1/8^{th}$ inch diameter) stainless steel aircraft cable. The bucket contents shall be mixed with a stainless steel laboratory propeller mixer powered by a variable-speed battery powered hand drill. The mixer is rinsed with DI water between buckets. EPA will provide the buckets but the contractor shall assure adequate notice for replenishment as needed and assure the buckets are cleaned before being installed. EPA will provide the mixer and the drill. If the sample is collected directly from the tank, the water volume intercepted by the bucket shall be added to the tank before homogenizing and sampling.

Curb cut samples and diversion box samples are collected using battery operated American Sigma autosamplers. The autosampler at diversion box and one curb cut shall be fitted with a single precleaned 20-L carboy to collect a composite sample. The second autosampler at a curbcut shall be loaded with 24 precleaned 1-L sample bottles. EPA will provide the bottles but the contractor shall be responsible for cleaning and installing the bottles and assuring that the batteries are suitably charged.

e) Sample preparation: Each source will be sampled for all parameters identified in the QAPP. Samples are analyzed for total and dissolved metals, speciated nutrients, carbon, chloride, and solids from each event. All sample containers shall be cleaned appropriate to the intended sample analyses. Labeling sample containers following standard naming protocols as provided in SOPs; logging samples into the on-site sample management system; filtration of dissolved-fraction samples; preserving samples; packing and sealing EPA-provided coolers; preparing the electronic and hard copy chains of custody and shipping documents; and transferring the samples to UPS for shipment to the EPA laboratory in Cincinnati. All packaging must meet applicable regulatory requirements for sample shipping. Each sample must be separately wrapped in a protective envelope before packing into the cooler (note, the samples may be sent using the EPA mail room on the EEC or taken to the local UPS office). Nitrogen samples shall be shipped in 40 ml glass bottles and SSC shall be collected in 1-L HDPE bottles. All other samples shall be collected in 100 ml HDPE bottles. One additional 1-L HDPE bottle shall be collected for back-up. The reserve sample shall be kept in the EPA refrigerator at the EEC until all samples have been analyzed. When EPA notifies the contractor that the reserve sample is no longer needed, the contractor shall appropriately dispose of the sample.

f) On-site sample analyses: The contractor shall analyze samples from each source for designated on-site analytes (COD, SSC, pH, conductivity, Redox potential). The contractor shall provide results in a Microsoft Excel-compatible spreadsheet format within two weeks of the sample event. The analytical results shall include a summary of the sampling information (e.g., sample time, autosampler log in ASCII format, sample type, etc.) and QA data (e.g., calibration of meters and balances). Method of data transfer will be specified after award based on level of security approved access.

g) Weather station down loads: EPA has a weather station on the roof of building 205 with separate tipping bucket rain gauges. The contractor shall download the devices and provide results in spreadsheet format within 2 weeks of the sample event. The contractor shall perform the required maintenance and calibration as outlined by the equipment manufacturers of the weather stations and instruments. Additionally, annual calibration is required for the UWRF weather station, which requires the Task Order COR to coordinate with the EPA facility manager so that access via cherry picker can be provided.

h) Logger Programming and ongoing support for data management: the current system provides data on a routine and timely basis at 10-minute intervals. The program switches to 1-minute intervals when triggered by the pluviometer installed at the east side of the parking lot. Once triggered all connected data loggers shall create a separate data table at 1-minute interval until there have been 6 rain-free hours. The networked data loggers shall communicate via frequency hopping spread spectrum radios. All data shall flow to the “tank level” logger that has a dedicated cellular modem that transfers data files daily to the EPA RTP anonymous FTP site. The contractor shall provide a programmer familiar with Campbell Scientific’s proprietary Loggernet software.

i) Rain Gardens: The contractor shall make downloads of the level loggers installed in the rain gardens and provide results in spreadsheet format within two weeks of the sample event. Where necessary data shall be post processed for barometric compensation.

j) Exercising options: The Government has the option to extend the term of this task order

for one additional sampling event and for two additional annual period(s) of quarterly sampling. If more than 60 days remain in the task order period of performance, the Government, without prior written notification, may exercise this option by issuing a task order modification. To exercise this option within the last 60 days of the period of performance, the Government must provide to the Contractor written notification prior to that last 60-day period. This preliminary notification does not commit the Government to exercising the option.

DELIVERABLES

1. Upon award of the task order, the contractor shall prepare for a meeting with the Task Order COR within 10 days. The meeting shall provide access requirements to the UWRF, review Quality Assurance requirements, the QAPP, relevant SOPS and loosely schedule periods for sampling and downloads. As the contractor's performance will require periodic access to the site additional ad-hoc face-to-face meetings with technical lead is expected for the project. All other correspondence is to be done by other means; e.g., e-mail, telephone and mail.
2. The contractor shall comply with all requirements as delineated on the "Quality Assurance Planning Requirements Form" included with this extramural action.
3. The contractor shall provide technical reports to the EPA Task Order COR three weeks after the conclusion of each sampling and analysis event. The report shall be in a letter format. The brief reports (less than two pages) shall contain the following elements:
    a. Narrative discussion of progress to date.
    b. Cost/schedule status.
    c. Discussion of problems encountered and their resolution or current status.
    d. Appendices including meeting reports, trip reports, economic cost analysis, etc.
    e. Narrative description of plans for the next quarter's activities.

4. Data and Analysis. The contractor shall submit one copy of all data and related calibration curves per sampling and analysis event. The data shall be in a format compatible with spreadsheet and statistical packages (e.g., dBase, Excel, SigmaStat, Statisitica). The data may be submitted on CD ROM. Software Application files, if delivered to the Government, shall conform to the requirements relating to accessibility as detailed to the 1998 amendments to the Rehabilitation Act, particularly, but not limited to, § 1194.21 Software applications and operating systems. Accordingly, all documents shall be submitted in Microsoft Word 2007.

Deliverables

	Activity	Date
1.	Meeting	One week (10 business days after award of task order)
2.	First event	March 2014
3.	Second event	May 2014
4.	Third event	July 2014
	Fourth Event	October 2014
5.	Turn in any materials required for access to EPA facilities	November 2014 (unless no-cost task order extension due to lack of rainfall or option executed)

ATTACHMENT #1
TO THE STATEMENT OF WORK

NRMRL QA Requirements and Definitions

EPA's Quality System Website: http://www.epa.gov/quality/

EPA's Requirements and Guidance Documents: http://www.epa.gov/quality/qa_docs.html

In accordance with EPA Order 5360.1 A2, conformance to ANSI/ASQC E4 must be demonstrated by submitting the quality documentation described herein. All quality documentation shall be submitted to the Government for review. The Government will review and return the quality documentation, with comments, and indicate approval or disapproval. If the quality documentation is not approved, it must be revised to address all comments and shall be resubmitted to the Government for approval. Work involving environmental data collection, generation, use, or reporting shall not commence until the Government has approved the quality documentation. The QAPP shall be submitted to the Government at least thirty (30) days prior to the beginning of any environmental data gathering or generation activity in order to allow sufficient time for review and revisions to be completed. After the Government has approved the quality documentation, the Contractor shall also implement it as written and approved by the Government.

Definitions:

Environmental Data - These are any measurements or information that describe environmental processes, location, or conditions; ecological or health effects and consequences; or the performance of environmental technology. For EPA, environmental data include information collected directly from measurements, produced from software and models, and compiled from other sources such as data bases or the literature.

Quality Assurance (QA) - Quality assurance is a system of management activities to ensure that a process, item, or service is of the type and quality needed by the customer. It deals with setting policy and running an administrative system of management controls that cover planning, implementation, and review of data collection activities and the use of data in decision making. Quality assurance is just one part of a quality system.

Quality Assurance Project Plan (QAPP) - A QAPP is a document that describes the necessary quality assurance, quality control, and other technical activities that must be implemented to ensure that the results of the work performed will satisfy the stated performance criteria. A QAPP documents project-specific information.

Quality Control (QC) - Quality control is a technical function that includes all the scientific precautions, such as calibrations and duplications, that are needed to acquire

data of known and adequate quality.

Quality Management Plan (QMP) - A QMP is a document that describes an organization's/program's quality system in terms of the organizational structure, policy and procedures, functional responsibilities of management and staff, lines of authority, and required interfaces for those planning, implementing, documenting, and assessing all activities conducted. A QMP documents the overall organization/program, and is primarily applicable to multi-year, multi-project efforts. An organization's/program's QMP shall address all elements listed in the "Requirements for Quality Management Plans" in Appendix B of the NRMRL QMP.

Quality System - A quality system is the means by which an organization manages its quality aspects in a systematic, organized manner and provides a framework for planning, implementing, and assessing work performed by an organization and for carrying out required quality assurance and quality control activities.

R-2 - EPA Requirements for Quality Management Plans (EPA/240/B-01/002) March, 2001, http://www.epa.gov/quality/qs-docs/r2-final.pdf

R-5 - EPA Requirements for QA Project Plans (EPA/240/B-01/003) March, 2001 http://www.epa.gov/quality/qs-docs/r5-final.pdf

Substantive Change - Substantive change is any change in an activity that may alter the quality of data being used, generated, or gathered.

NRMRL's Quality System Specifications:

(1) a description of the organization's Quality System (QS) and information regarding how this QS is documented, communicated and implemented;

(2) an organizational chart showing the position of the QA function;

(3) delineation of the authority and responsibilities of the QA function;

(4) the background and experience of the QA personnel who will be assigned to the project; and

(5) the organization's general approach for accomplishing the QA specifications in the SOW.

Category Level Designations (determines the level of QA required):

__ **Category I Project** - applicable to studies performed to generate data used for enforcement activities, litigation, or research project involving human subjects. The QAPP shall address all elements listed in R-5.

__ **Category II Project** - applicable to studies performed to generate data used in support of the development of environmental regulations or standards. The QAPP shall address all elements listed in R-5.

__ **Category III Project** - applicable to projects involving applied research or technology evaluations. The QAPP shall address the applicable sections of R-5, as outlined in the NRMRL QAPP requirements for the specific project type (see below).

__ **Category IV Project** - applicable to projects involving basic research or preliminary data gathering activities. The QAPP shall address the applicable sections of R-5, as outlined in the NRMRL QAPP requirements for the specific project type (see below).

Guidance for QAPPs by Project Type (described in more detail on subsequent pages)**:**

These outlines of NRMRL QAPP Requirements for various project types, from Appendix B of the NRMRL QMP (except where otherwise noted), are condensed from typically applicable sections of R-5 (EPA Requirements for QA Project Plans**)** and are intended to serve as a starting point when preparing a QAPP. These lists and their format may not fit every research scenario, and QAPPs must conform to applicable sections of R-5 in a way that fully describes the research plan and appropriate QA and QC measures to ensure that the data are of adequate quality and quantity to fit their intended purpose.

__ **Applied Research Project** - pertains to a study performed to generate data to demonstrate the performance of accepted processes or technologies under defined conditions. These studies are often pilot- or field-scale. Additional guidance is given in AQAPP Requirements for Applied Research Projects@.

__ **Basic Research Project** - pertains to a study performed to generate data used to evaluate unproven theories, processes, or technologies. These studies are often bench-scale. Additional guidance is given in AQAPP Requirements for Basic Research Projects@.

_ **Design, Construction, and/or Operation of Environmental Technology Project** - pertains to engineering projects involving environmental technologies, an all inclusive term used to describe pollution control devices and systems, waste treatment processes and storage facilities, and site remediation technologies and their components that may be utilized to remove pollutants or contaminants from or prevent them from entering the environment. Comprehensive guidance can be found in the EPA Quality System document AGuidance on Quality Assurance for Environmental Technology Design, Construction, and Operation@ G-11, at http://www.epa.gov/quality/qs-docs/g11-final-05.pdf.

_ **Method Development Project** - pertains to situations where there is no existing standard method, or a standard method needs to be significantly modified for a specific application. Additional guidance is given in AQAPP Requirements for Method Development Projects@ .

_ **Model Development Project** - includes all types of mathematical models including static, dynamic, deterministic, stochastic, mechanistic, empirical, etc. Comprehensive guidance is provided in the EPA Quality System document AGuidance for Quality Assurance Project Plans for Modeling@ G-5M, http://www.epa.gov/quality/qs-docs/g5m-final.pdf. Abbreviated guidance is provided in AQAPP Requirements for Research Model Development and Application Projects@.

_ **Sampling and Analysis Project** - pertains to the collection and analysis of samples with no objectives other than to provide characterization or monitoring information. Additional guidance is given in AQAPP Requirements for Sampling and Analysis Projects@.

_ **Secondary Data Project** - pertains to environmental data collected from other sources, by or for EPA, that are used for purposes other than those originally intended. Sources may include: literature, industry surveys, compilations from computerized databases and information systems, and computerized or mathematical models of environmental processes. Additional guidance is given in AQAPP Requirements for Secondary Data Projects@.

_ **Software Development Project** - pertains to projects dealing with software development or data management and includes all types of software/hardware systems development, data base design and maintenance, and data validation and verification systems. Additional guidance is given in AQAPP Requirements for Software and Data Management Projects@.